

## Computing Curriculum Intent

To maximise the effect of the short, intensive 10 week rotation, coding has been made a priority, and is a core strand throughout KS3. The reasons for this are:

- Coding is a skill that needs practising a little and often. By prioritising coding across KS3, it gives pupils a solid foundation in the area that traditionally is found the hardest at GCSE (should they choose the subject at KS4).
- Coding is an academically rigorous process that offers transferable skills other than just memory and recall, in particular that of meta cognition and problem solving. It is therefore of greater benefit than theoretical work, even for those not pursuing the subject at KS4.
- Pupils find coding an engaging activity. It is a unique skill, which offers completely different challenges from those found in other subjects.
- Coding is mandatory at KS4, and it is our intent is to deliver high quality Computing lessons in a cross curricular fashion, with a focus on STEM subjects. Therefore all pupils will need a foundation at KS3.

The coding skills build incrementally across the Key Stage; Yr 7 starting with HTML to understand the idea of written instructions, requiring a specific syntax and needing to be accurately written, result in a desired output. This leads to basic sequence, selection and iteration in a block editor, to enable pupils to understand the concepts without being hampered by syntax errors. These skills are then transferred to a child centred text editor (Small Basic).

In Yr 8 the concepts of sequence, selection and iteration are revisited, but in the full version of Visual Basic. For Mid to high prior attainers single arrays and count controlled loops are introduced.

In Yr 9 the same concepts of sequence, selection and iteration are revisited, but this time introducing sub programs to create a text adventure game. Again, single arrays and for loops are revisited and reinforced. There are three curriculum routes here that pupils can follow; text based Python for HPA and MPA students, and the block editor route to support LPAs. Pupils can also opt to complete the game in VB if they prefer the familiarity of the syntax from Year 8.

As well as this, there is a theory strand in Years 8 and 9. In Year 8 representing images and sound, together with different number bases has been chosen, as this is a good representation of the difference between IT and Computer Science i.e. it demonstrates that Computer Science is how a Computer works, not how to use one. This is important as pupils must be considering their options choices in Year 8, due to the nature of the rotation meaning their rotation in Year 9 may come after they have chosen their options. In Year 9 a variety of Ethical Legal, Cultural and Environmental issues are looked at, as an interesting and highly relevant section of understanding i.e. relevant and interesting to all pupils, not just those who are pursuing at KS4.